#31

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/267,963D

DATE: 04/18/2003
TIME: 14:22:06

Input Set : N:\Crf4\04072003\I267963B.raw
Output Set: N:\CRF4\04182003\I267963D.raw

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  1 <110> APPLICANT: MIYAZONO, Kohei
  2       IMAMURA, Takeshe
  3       DEN DIJKE, Peter
  4 <120> TITLE OF INVENTION: PROTEINS HAVING SERINE/THREONINE KINASE DOMAINS,
CORRESPONDING
  5       NUCLEIC ACID MOLECULES AND THEIR USE
  6 <130> FILE REFERENCE: LUD 5539.1 CIP
C--> 7 <140> CURRENT APPLICATION NUMBER: US/09/267,963D
  8 <141> CURRENT FILING DATE: 1999-03-12
  9 <150> PRIOR APPLICATION NUMBER: PCT/GB93/02367
 10 <151> PRIOR FILING DATE: 1993-11-17
 11 <150> PRIOR APPLICATION NUMBER: US 09/039,177
 12 <151> PRIOR FILING DATE: 1998-03-13
 13 <160> NUMBER OF SEQ ID NOS: 46
 14 <170> SOFTWARE: PatentIn version 3.2
 16 <210> SEQ ID NO: 1
 17 <211> LENGTH: 1984
 18 <212> TYPE: DNA
 19 <213> ORGANISM: Homo sapiens
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 23       gagcgagccc ctccccggct ccagcccggt ccggggccgc gccggacccc agcccgccgt     180
 24       ccagcgctgg cggtgcaact gcggccgcgc ggtggagggg aggtggcccc ggtccgccga     240
 25       aggctagcgc cccgccaccc gcagagcggg cccagaggga ccatgacctt gggctccccc     300
 26       aggaaaggcc ttctgatgct gctgatggcc ttggtgaccc agggagaccc tgtgaagccg     360
 27       tctcggggcc cgctggtgac ctgcacgtgt gagagcccac attgcaaggg gcctacctgc     420
 28       cggggggcct ggtgcacagt agtgctggtg cgggaggagg ggaggcaccc caggaacat     480
 29       cggggctgcg ggaacttgca cagggagctc tgcaggggc gccccaccga gttcgtcaac     540
 30       cactactgct gcgacagcca cctctgcaac cacaacgtgt ccctggtgct ggaggccacc     600
 31       caacctcctt cggagcagcc gggaacagat ggccagctgg ccctgatcct gggccccgtg     660
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 33       caggagaagc agcgtggcct gcacagcgag ctgggagagt ccagtctcat cctgaaagca     780
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 36       tgtgtgggaa aaggccgcta tggcgaagtg tggcgggggct tgtggcacgg tgagagtgtg     960
 37       gccgtcaaga tcttctcctc gagggatgaa cagtcctggt ccgggagac tgagatctat    1020
 38       aacacagtat tgctcagaca cgacaacatc ctaggcttca tcgcctcaga catgacctcc    1080
 39       cgcaactcga gcacgcagct gtggctcatc acgcactacc acgagcacgg ctccctctac    1140
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 43       gccgacctgg gcctggctgt gatgcactca cagggcagcg attacctgga catcggcaac    1380
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67      Ala Trp Cys Thr Val Val Leu Val Arg Glu Glu Gly Arg His Pro Gln
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70      65                  70                  75                  80
71      Pro Thr Glu Phe Val Asn His Tyr Cys Cys Asp Ser His Leu Cys Asn
72                  85                  90                  95
73      His Asn Val Ser Leu Val Leu Glu Ala Thr Gln Pro Pro Ser Glu Gln
74                  100                 105                 110
75      Pro Gly Thr Asp Gly Gln Leu Ala Leu Ile Leu Gly Pro Val Leu Ala
76                  115                 120                 125
77      Leu Leu Ala Leu Val Ala Leu Gly Val Leu Gly Leu Trp His Val Arg
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79      Arg Arg Gln Glu Lys Gln Arg Gly Leu His Ser Glu Leu Gly Glu Ser
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81      Ser Leu Ile Leu Lys Ala Ser Glu Gln Gly Asp Thr Met Leu Gly Asp
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83      Leu Leu Asp Ser Asp Cys Thr Thr Gly Ser Gly Ser Gly Leu Pro Phe
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85      Leu Val Gln Arg Thr Val Ala Arg Gln Val Ala Leu Val Glu Cys Val
86                  195                 200                 205
87      Gly Lys Gly Arg Tyr Gly Glu Val Trp Arg Gly Leu Trp His Gly Glu
88          210                 215                 220
89      Ser Val Ala Val Lys Ile Phe Ser Ser Arg Asp Glu Gln Ser Trp Phe
90      225                 230                 235                 240
91      Arg Glu Thr Glu Ile Tyr Asn Thr Val Leu Leu Arg His Asp Asn Ile
92                  245                 250                 255
93      Leu Gly Phe Ile Ala Ser Asp Met Thr Ser Arg Asn Ser Ser Thr Gln
94                  260                 265                 270
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RAW SEQUENCE LISTING   DATE: 04/18/2003
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Input Set : **N:\Crf4\04072003\I267963B.raw**
Output Set: **N:\CRF4\04182003\I267963D.raw**

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 97        Leu Gln Arg Gln Thr Leu Glu Pro His Leu Ala Leu Arg Leu Ala Val
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100        305                 310                 315                 320
101        Gln Gly Lys Pro Ala Ile Ala His Arg Asp Phe Lys Ser Arg Asn Val
102                        325                 330                 335
103        Leu Val Lys Ser Asn Leu Gln Cys Cys Ile Ala Asp Leu Gly Leu Ala
104                    340                 345                 350
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108                370                 375                 380
109        Ile Arg Thr Asp Cys Phe Glu Ser Tyr Lys Trp Thr Asp Ile Trp Ala
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111        Phe Gly Leu Val Leu Trp Glu Ile Ala Arg Arg Thr Ile Val Asn Gly
112                        405                 410                 415
113        Ile Val Glu Asp Tyr Arg Pro Pro Phe Tyr Asp Val Val Pro Asn Asp
114                    420                 425                 430
115        Pro Ser Phe Glu Asp Met Lys Lys Val Val Cys Val Asp Gln Gln Thr
116                    435                 440                 445
117        Pro Thr Ile Pro Asn Arg Leu Ala Ala Asp Pro Val Leu Ser Gly Leu
118                450                 455                 460
119        Ala Gln Met Met Arg Glu Cys Trp Tyr Pro Asn Pro Ser Ala Arg Leu
120        465                 470                 475                 480
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133        gattcttcct gtgcttatca tgattgctct cccctcccct agtatggaag atgagaagcc      180
134        caaggtcaac cccaaactct acatgtgtgt gtgtgaaggt ctctcctgcg gtaatgagga      240
135        ccactgtgaa ggccagcagt gcttttcctc actgagcatc aacgatggct tccacgtcta      300
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143        ccagattaca ctgttggagt gtgtcgggaa aggcaggtat ggtgaggtgt ggaggggcag      780
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172      actgtaactt tttttcagtt catatgcaga acgtatttag ccattaccca cgtgacacca     2520
173      ccgaatatat tatcgattta gaagcaaaga tttcagtaga attttagtcc tgaacgctac     2580
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187      Tyr Met Cys Val Cys Glu Gly Leu Ser Cys Gly Asn Glu Asp His Cys
188              35                  40                  45
189      Glu Gly Gln Gln Cys Phe Ser Ser Leu Ser Ile Asn Asp Gly Phe His
190          50                  55                  60
191      Val Tyr Gln Lys Gly Cys Phe Gln Val Tyr Glu Gln Gly Lys Met Thr
192      65                  70                  75                  80
193      Cys Lys Thr Pro Pro Ser Pro Gly Gln Ala Val Glu Cys Cys Gln Gly
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Input Set : **N:\Crf4\04072003\I267963B.raw**
Output Set: **N:\CRF4\04182003\I267963D.raw**

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200              130             135             140
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202      145             150             155             160
203      Asp Val Glu Tyr Gly Thr Ile Glu Gly Leu Ile Thr Thr Asn Val Gly
204              165             170             175
205      Asp Ser Thr Leu Ala Asp Leu Leu Asp His Ser Cys Thr Ser Gly Ser
206              180             185             190
207      Gly Ser Gly Leu Pro Phe Leu Val Gln Arg Thr Val Ala Arg Gln Ile
208              195             200             205
209      Thr Leu Leu Glu Cys Val Gly Lys Gly Arg Tyr Gly Glu Val Trp Arg
210              210             215             220
211      Gly Ser Trp Gln Gly Glu Asn Val Ala Val Lys Ile Phe Ser Ser Arg
212      225             230             235             240
213      Asp Glu Lys Ser Trp Phe Arg Glu Thr Glu Leu Tyr Asn Thr Val Met
214              245             250             255
215      Leu Arg His Glu Asn Ile Leu Gly Phe Ile Ala Ser Asp Met Thr Ser
216              260             265             270
217      Arg His Ser Ser Thr Gln Leu Trp Leu Ile Thr His Tyr His Glu Met
218              275             280             285
219      Gly Ser Leu Tyr Asp Tyr Leu Gln Leu Thr Thr Leu Asp Thr Val Ser
220              290             295             300
221      Cys Leu Arg Ile Val Leu Ser Ile Ala Ser Gly Leu Ala His Leu His
222      305             310             315             320
223      Ile Glu Ile Phe Gly Thr Gln Gly Lys Pro Ala Ile Ala His Arg Asp
224              325             330             335
225      Leu Lys Ser Lys Asn Ile Leu Val Lys Lys Asn Gly Gln Cys Cys Ile
226              340             345             350
227      Ala Asp Leu Gly Leu Ala Val Met His Ser Gln Ser Thr Asn Gln Leu
228              355             360             365
229      Asp Val Gly Asn Asn Pro Arg Val Gly Thr Lys Arg Tyr Met Ala Pro
230              370             375             380
231      Glu Val Leu Asp Glu Thr Ile Gln Val Asp Cys Phe Asp Ser Tyr Lys
232      385             390             395             400
233      Arg Val Asp Ile Trp Ala Phe Gly Leu Val Leu Trp Glu Val Ala Arg
234              405             410             415
235      Arg Met Val Ser Asn Gly Ile Val Glu Asp Tyr Lys Pro Pro Phe Tyr
236              420             425             430
237      Asp Val Val Pro Asn Asp Pro Ser Phe Glu Asp Met Arg Lys Val Val
238              435             440             445
239      Cys Val Asp Gln Gln Arg Pro Asn Ile Pro Asn Arg Trp Phe Ser Asp
240              450             455             460
241      Pro Thr Leu Thr Ser Leu Ala Lys Leu Met Lys Glu Cys Trp Tyr Gln
242      465             470             475             480
243      Asn Pro Ser Ala Arg Leu Thr Ala Leu Arg Ile Lys Lys Thr Leu Thr
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 04/18/2003
PATENT APPLICATION: **US/09/267,963D**   TIME: 14:22:07

Input Set : **N:\Crf4\04072003\I267963B.raw**
Output Set: **N:\CRF4\04182003\I267963D.raw**

<u>Please Note:</u>
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:19; N Pos. 20
Seq#:26; Xaa Pos. 2,4,5
Seq#:43; Xaa Pos. 2,3,4,5,6
Seq#:44; Xaa Pos. 1,3,4,6

<u>Invalid Line Length:</u>
The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 4

VERIFICATION SUMMARY　　　　　　　　DATE: 04/18/2003
PATENT APPLICATION:　**US/09/267,963D**　　　TIME: 14:22:07

Input Set : **N:\Crf4\04072003\I267963B.raw**
Output Set: **N:\CRF4\04182003\I267963D.raw**

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L:1063 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
L:1134 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0
L:1591 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0
L:1617 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:0
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